

Claims

- [c1] 1. A load carrier arrangement for transporting a bicycle when secured thereupon, said load carrier arrangement comprising:
- a frame assembly adapted to be mounted to a carrying vehicle, said frame assembly comprising at least one elongate arm configured to receive a bicycle cradle thereupon;
 - a bicycle cradle mounted upon said arm and being operator configurable between a bicycle transporting configuration and a non-transporting configuration;
 - said cradle having a through-passage within which said elongate arm is received, said cradle being operator reciprocal on said elongate arm in the non-transporting configuration thereby facilitating variable longitudinal positioning of said cradle by the operator upon said arm; and
 - said cradle having an increased resistance to longitudinal reciprocation on said elongate arm in said bicycle transporting configuration in comparison to said non-transporting configuration and thereby being effectively longitudinally fixed on said elongate arm in the bicycle transporting configuration to an extent that a secured portion of a carried bicycle in said cradle is longitudinally fixed relative to said elongate arm during transport on said load carrier arrangement.
- [c2] 2. A load carrier arrangement for transporting a bicycle when secured thereupon, said load carrier arrangement comprising:
- a frame assembly adapted to be mounted to a carrying vehicle, said frame assembly comprising at least one elongate arm configured to receive a bicycle cradle thereupon;
 - an anchor means for fixing a bicycle upon said arm, said anchor means being adapted for operator configuration between a bicycle transporting

configuration and a non-transporting configuration;

said anchor means having a through-passage within which said elongate arm is received and which is adapted for being operator reciprocated on said elongate arm in the non-transporting configuration for establishing variable longitudinal positioning of said anchor means by the operator upon said arm; and

said anchor means having an increased resistance to longitudinal reciprocation on said elongate arm in said bicycle transporting configuration in comparison to said non-transporting configuration for being effectively longitudinally fixed on said elongate arm in the bicycle transporting configuration to an extent that a secured portion of a carried bicycle in said anchor means is longitudinally fixed relative to said elongate arm during transport on said load carrier arrangement.

[c3] 3. The invention as recited in claim 2, wherein said anchor means is bicycle cradle.

[c4] 4. A method for providing a load carrier arrangement for transporting a bicycle when secured thereupon, said method comprising:
utilizing a load carrier arrangement having a frame assembly mounted to a carrying vehicle and that includes an elongate arm configured to receive a bicycle cradle thereupon to transport a bicycle, said bicycle cradle being operator configurable between a bicycle transporting configuration in which said cradle is tight-fitting upon said arm and a non-transporting configuration in which said cradle is comparably loose-fitting upon said arm; and
reconfiguring said bicycle cradle to said non-transporting configuration after transporting use and thereby limiting strain induced, cold-flow creep in said bicycle cradle that results in a reduction of tightness of fit of said

cradle upon said arm to periods when said bicycle transporting configuration is assumed.

- [c5] 5. The invention as recited in claim 4, further comprising:
preserving a designed tightness-of-fit of said cradle upon said arm during bicycle transporting configuration by said limitation of strain induced, cold-flow creep in said bicycle cradle.
- [c6] 6. The invention as recited in claim 4, wherein said cradle has a through-passage within which said elongate arm is received, said cradle being operator reciprocal on said elongate arm in the non-transporting configuration thereby facilitating variable longitudinal positioning of said cradle by the operator upon said arm; and said cradle having an increased resistance to longitudinal reciprocation on said elongate arm in said bicycle transporting configuration in comparison to said non-transporting configuration and thereby being effectively longitudinally fixed on said elongate arm in the bicycle transporting configuration to an extent that a secured portion of a carried bicycle in said cradle is longitudinally fixed relative to said elongate arm during transport on said load carrier arrangement.
- [c7] 7. The invention as recited in any one of claims 1, 3, and 6, wherein said cradle comprises a plurality of cradle pieces.
- [c8] 8. The invention as recited in claim 7, wherein said through-passage is constituted by a series of apertures, one each located in a plurality of said cradle pieces.
- [c9] 9. The invention as recited in claim 8, wherein said series of apertures constituting said through-passage are sufficiently aligned in said non-transporting configuration to achieve said facilitation of variable

longitudinal positioning of said cradle by the operator upon said arm.

- [c10] 10. The invention as recited in claim 8, wherein at least one of said series of apertures constituting said through-passage is sufficiently misaligned in said transporting configuration to establish a binding effect between said cradle and said elongate arm and thereby effects said longitudinal fixation of said cradle on said elongate arm in the bicycle transporting configuration.
- [c11] 11. The invention as recited in claim 8, wherein transition of said cradle from said non-transporting configuration to said bicycle transporting configuration establishes a binding effect between said cradle and said elongate arm sufficient to establish an anchor for a secured portion of a carried bicycle in said cradle during transport.
- [c12] 12. The invention as recited in any one of claims 1, 3, and 6, wherein said cradle comprises a plurality of variably configurable cradle portions, at least one of said cradle portions being a binding assembly that more forcefully abuts said elongate arm in said bicycle transporting configuration than in said non-transporting configuration.
- [c13] 13. The invention as recited in claim 12, wherein said binding assembly comprises a binding portion coupled to a lever portion through which a binding force is communicated that fixes said cradle to said elongate arm in said bicycle transporting configuration.
- [c14] 14. The invention as recited in claim 12, wherein said binding assembly comprises a lever through which a binding force is communicated that fixes said cradle to said elongate arm in said bicycle transporting configuration.

- [c15] 15. The invention as recited in any one of claims 1, 3, and 6, wherein said through-passage comprises a series of apertures, at least one of which is configured in said non-transporting configuration to accommodate reciprocation of said elongate arm therein and is reoriented in said bicycle transporting configuration to bind on said elongate arm and resist reciprocation of said elongate arm therein.
- [c16] 16. The invention as recited in any one of claims 1, 3, and 6, wherein different portions of said cradle are constructed from different durometer materials.
- [c17] 17. The invention as recited in claim 16, wherein at least one portion of said cradle is constructed from a plastic susceptible to cold-flow creep.
- [c18] 18. The invention as recited in any one of claims 1, 3, and 6, wherein portions of said cradle establishing a tightenable fit to said arm are constructed from a material susceptible to cold-flow creep, said portions experiencing creep effects when tightened upon said arm in said bicycle transporting configuration and said portions experiencing reduced creep effects when loosened upon said arm in said non-transporting configuration in comparison to when in said bicycle transporting configuration.
- [c19] 19. The invention as recited in claim 18, wherein said material of construction is plastic.
- [c20] 20. The invention as recited in any one of claims 1, 3, and 6, wherein said cradle further comprises a base for receiving a bicycle frame tube and a variably adjustable, flexible retaining strap for anchoring the bicycle frame tube in said base.

- [c21] 21. The invention as recited in claim 20, wherein said base further comprises a ribbed bicycle-engaging surface for resisting twisting action of the bicycle frame tube in said base.
- [c22] 22. The invention as recited in claim 20, wherein said base further comprises a fastening tab and said retaining strap comprises fastening holes that cooperatively constitute a custom-fit securement mechanism for anchoring a bicycle in said cradle.
- [c23] 23. The invention as recited in any one of claims 1, 3, and 6, wherein said cradle comprises a plurality of variably configurable cradle portions, at least one of said cradle portions being a binding assembly that more forcefully abuts said elongate arm in said bicycle transporting configuration than in said non-transporting configuration, said binding assembly being actuated by a flexible retaining strap configured to releasably anchor a bicycle frame tube in said base.
- [c24] 24. The invention as recited in any one of claims 1, 3, and 6, wherein said through-passage is variably constricting upon said arm between said bicycle transporting configuration and said non-transporting configuration.
- [c25] 25. The invention as recited in claim 24, wherein said variable constriction of said through-passage upon said arm is actuated by a flexible retaining strap configured to releasably anchor a bicycle frame tube in said base.
- [c26] 26. The invention as recited in claim 25, wherein said flexible retaining strap acts on a binding portion of said cradle via a lever portion through which a binding force is communicated and that fixes said cradle to said elongate arm in said bicycle transporting configuration.
- [c27] 27. The invention as recited in any one of claims 1, 3, and 6, wherein the

load carrier arrangement further comprises a hub coupled between a support member and a load carrying member; said hub having a socket formed therein, said socket being substantially cylindrically-shaped and configured to receive a substantially cylindrically-shaped insert portion of said load carrying member therein; said load carrying member having an insert portion and a load carrying portion with an angle interposed therebetween which fixes said insert portion and said load carrying portion in non-parallel orientation to one another; and said insert portion of said load carrying member being twistably positioned in said socket thereby enabling twisting action therein which affects a transition between a load carrying orientation and a twist-adjusted orientation.

[c28] 28. The invention as recited in claim 27, further comprising said angle interposed between said insert portion and said load carrying portion measuring approximately forty-five degrees so that a one-hundred and eighty degree twist of said insert portion in said socket causes said load carrying portion to transition between approximately perpendicular orientations.

[c29] 29. The invention as recited in claim 27 further comprising: said angle interposed between said insert portion and said load carrying portion measuring approximately forty-five degrees so that a less than ninety degree twist of said insert portion in said socket causes said load carrying portion to transition between two different load carrying orientations.